

## Problems based learning curriculum and the changing role of the library

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### Summary

Several medical schools have adopted some version of problem based learning (PBL) in the process of changing their curricula in the last few decades. PBL is student based learning and the students need to gain the knowledge and the ability to use library resources. Therefore the library is called upon to play a new role as guide, negotiator and facilitator for the students to search for reading materials in print or non-print form. The results of a number of surveys have revealed that the students in PBL curricula make more use of the library than those in traditional curricula. Medical libraries are encountered with several challenges such as selecting reading material for clinical problems at all levels and providing an effective library orientation programme.

### Introduction

With health care reform receiving much priority reform in medical education has become a great concern for those engaged in the field of medical education. In the recent past a considerable number of medical schools have modified their curriculum by adopting some version of problem based learning (PBL) (1). With the introduction of PBL there is a greater emphasis on the relevance and value of information in the educational programme and as a result there is a positioning of the library at the heart of the whole educational process. One of the features of PBL curriculum is student directed learning and the students acquire a skill in using texts, monographs, periodical literature and a variety of other sources. Therefore with the implementation of PBL, medical libraries have a greater role to play in training the students to search for information and in providing such information.

### Use of Resources

Students and faculty in PBL curricula use the library and its information resources differently from those adhering to traditional programmes. Further library planning has to be done taking into account these differences in library usage. Research carried out by Neufeld and Spaulding on the use of resources at McMaster University revealed that use of library resources is one of the major differences between students in PBL and traditional curricula (2). The McMaster University medical programme has been oriented towards PBL since its inception in 1965. A more recent survey on library use by students in PBL at the McMaster University carried out by Marshall *et al.* in 1991 showed that a higher proportion of medical students use the library than do students in the other programmes. The data of the McMaster survey also suggested that heavier use of the library by PBL students may be concentrated in the early years of the programme. The results of the survey also showed that students in the PBL programme were more intensive library users than were students in more traditional programmes. A higher proportion of students in PBL programmes used reference books such as dictionaries and handbooks, read library journals and other materials in reserve, photocopy journal articles, use audio-visual materials and made use of the library for studying. The survey data also revealed that students in PBL programmes do more MEDLINE searching than do students in traditional programmes (3).

### Challenges

The PBL process provides new challenges and opportunities for the library beyond those present within the conventional medical school

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curriculum. Although the PBL curriculum covers the same subjects as the traditional curriculum, it also has additional education aims, which directly affects the provision of library services. In the classical PBL curriculum, with only objectives stated and no assigned readings, a heavy burden is placed on the collection development staff of the library because the library must ensure that there are adequate resources for each clinical problems at all levels, from the molecular pathways to the clinical presentation. The library staff must be familiar with the clinical problems in order to select material to meet the needs of the stated curriculum objectives (4). In curricula where readings and resources are identified in a study guide, new challenges to the library staff arise depending on student purchase or non-purchase of basic texts. These challenges include providing adequate resources to meet student needs, including multiple copies of resources, a well selected reserve collection and adequate service hours. Another challenge faced by the library staff in a PBL curriculum is to provide an efficient readers' advisory services. The PBL student draws heavily on the library's guidance services. To support curricula without study guides or bibliographies, the library staff must be very familiar with the problems and the objectives and be prepared to assist students in finding library materials to solve their problems. If there is a guide or a reserve collection, the staff must be familiar with the study guide and the resources. Further, most PBL curricula are not planned in semesters as are conventional curricula and are divided into shorter phases. Therefore, the objectives, the reserve materials and the needed resources change much more frequently than in a conventional curriculum.

### **Library – Orientation**

A comprehensive library orientation service has to be provided to the students in a PBL curriculum as the students themselves select their resources. Training in computerized literature searching using various in-house and national software products is offered in several medical libraries. University of New Mexico has developed an elective on problem solving

techniques in information management and Southern Illinois University has a senior elective in medical informatics. As indicated by various user surveys, PBL students spend a greater amount of time in the library using library materials than those in the conventional curriculum. Therefore the library must be located close to the tutorial areas and in certain schools, smaller libraries have developed in tutorial areas. There must be adequate seating close to the reserve collections and resources such as models, specimens and x-rays need to be displayed at appropriate points. Libraries have also faced with the problem of keeping the library open during additional hours and extra staff to serve PBL students.

In a PBL setting because of the greater involvement in curriculum activities, the library staff are more integrated to the faculty life of the school than in traditional medical schools (5). Some of the librarians in the PBL Schools serve as tutors teaching information skills to formal groups. The importance of information seeking skills in PBL curriculum has enhanced the faculty role of librarians.

Librarians of medical colleges responding to a PBL curriculum should make a commitment to participate in the curriculum development process in all possible ways. Involvement in this process has helped to identify opportunities for integrating the library into the curriculum and for anticipating special demands upon library resources. Moreover, the library's educational programme should be linked to the curriculum in such a way that the students recognize the direct relevance of library instruction to their becoming physicians.

### **PBL at Colombo Medical Faculty**

Reform in medical education has been a concern of medical educators in Sri Lanka and the Faculty of Medicine, University of Colombo has implemented the initial phase of a curriculum revision that has several PBL sessions. The library has responded to this revision of the curriculum by displaying reading materials on topics relevant to the problems presented to the

students. Significant library staff time is been devoted to preparing materials needed by the students for problem solving and small group discussion. The challenge to the library is to make sufficient resources available so that students could investigate learning issues successfully and systematically. Apart from reading material, the library has to provide computers, online systems, audio visual resources and study space if the recently implemented curriculum revision at the Faculty of Medicine, University of Colombo is to achieve its targets. The provision of these library materials in varied formats should be accompanied with proper orientation programmes and such other programmes aimed at developing information seeking skills of the students.

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